

Patent Claims

1. A drill bit (1), in particular masonry drill bit, having an elongated shaft (15) and a cutting plate (2) with cutting edges (3, 3'; 4, 4') inclined in a rooflike manner at one end, each cutting edge (3, 3'; 4, 4') being formed by the abutment of a rake face (5, 5'; 6, 6'), which is situated in front of the cutting edge (3, 3'; 4, 4') in the direction of rotation (17) of the drill bit (1), and a flank (7, 7'; 8, 8'), which is situated behind the cutting edge (3, 3'; 4, 4') in the direction of rotation (17) of the drill bit (1), each rake face and flank enclosing a wedge angle γ with one another, and the cutting plate (2) having, in the central region of the drill bit (1), a centering tip which is offset with respect to the marginal regions and in which the cutting edges (4, 4') are set back in the direction of rotation (17) in relation to the cutting edges (3, 3') of the marginal regions, characterized in that the cutting edges (4, 4') of the centering tip have, at least in the region directly adjacent to the cutting edges, a rake angle α ranging from 70° to 90° and a wedge angle γ ranging from 50° to 70° .

2. The drill bit as claimed in claim 1, characterized in that the cutting edges (4, 4') of the centering tip are set back approximately by a third of the thickness s of the cutting plate (2) and run parallel to the cutting edges (3, 3') of the marginal regions.

3. The drill bit as claimed in either of claims 1-2, characterized in that the width b of the centering tip ranges from 25% to 50% of the drill bit diameter d .

4. The drill bit as claimed in one of claims 1-3, characterized in that the envelope (9) of the cutting edges

(4, 4') of the centering tip is offset with respect to the envelope (10) of the cutting edges (3, 3') of the marginal sections in the drill bit center by a distance a in the direction of the drill bit axis.

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5. The drill bit as claimed in claim 4, characterized in that the distance a ranges from 10% to 15% of the drill bit diameter d.

10 6. The drill bit as claimed in claim 4, characterized in that the point angle δ_1 of the cutting edges (4, 4') of the centering tip is smaller than the point angle δ_2 of the cutting edges (3, 3') of the marginal sections.

15 7. The drill bit as claimed in claim 6, characterized in that the point angle δ_1 is approximately 130° .

8. The drill bit as claimed in one of claims 1-7, characterized in that the point angle δ_2 is approximately 150° .

20 9. The drill bit as claimed in one of claims 1-8, characterized in that the rake faces (6, 6') of the cutting edges (4, 4') of the centering tip have a flat region (11, 11') which is directly adjacent to the cutting edges (4, 4') and merges into curved faces (12, 12'; 13, 13') which peter out centrally and downward, the flat region (11, 11') having a rake angle α of approximately 90° and the wedge angle γ being approximately 60° .

25 30 10. A cutting plate for use in a drill bit as claimed in one of claims 1 to 9.